



THE ENSTROM HELICOPTER CORPORATION

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SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER NO. T-039

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DATE: March 22, 2010

1. SUBJECT: Hi/Lo Rotor RPM Switch Installation, P/N 4199071
2. MODEL: 480, 480B
3. EFFECTIVITY: 480B, 5134 and subsequent and any 480/480B models that have been updated with the P/N ECD4079 Hi/Lo Rotor RPM Switch
4. REFERENCE: Enstrom TH-28/480 Series Maintenance Manual, Latest Revision
5. BACKGROUND:

Enstrom has certified a new installation for a P/N ECD4079 Hi/Lo Rotor RPM Switch that activates the warning light and the audio horn of the Rotor Warning System at rotor speeds outside of the rotor operating range (below 332 RPM or above 385 RPM). The previous system only activated the warning when the rotor RPM was below the operating range. The installation of the Rotor Warning System is “standard” equipment in the turbine aircraft. Operators wanting to update from the earlier Rotor Warning System to the P/N ECD4079 Hi/Lo Rotor RPM Switch should contact Enstrom Product Support for specific instructions.

This Service Information Letter (SIL) defines the maintenance aspects of the P/N ECD4079 Hi/Lo Rotor RPM Switch comprised in the Rotor Warning System, and it is intended to serve as an ICA.

6. COMPLIANCE:

NOTE

Perform all maintenance of the Rotor Warning System IAW the Enstrom TH-28/480 Series Maintenance Manual, paragraphs 6-157 through 6-184, and the paragraphs to follow.

6.1 DESCRIPTION – HI/LO ROTOR RPM WARNING SYSTEM

The Hi/Lo Rotor RPM Warning System consists of a warning light (LA3), a magnetic pickup, the Hi/Lo Rotor RPM Switch, a microswitch (SW18), a test switch (SW14), and an audio horn (AH1). The magnetic pickup, located next to the NR magnetic pickup, senses the main rotor transmission ring gear teeth passage and sends a signal to the Hi/Lo Rotor RPM Switch. The Hi/Lo Rotor RPM Switch, located on the keel structure below the pilot's seat, interrogates the incoming signal and triggers the ROTOR RPM warning light (LA3) and audio horn (AH1) when the main rotor rpm is below 332 RPM or above 385 RPM. The warning light (LA3) and audio horn (AH1) will be activated anytime the N_R is below 332 RPM or above 385 RPM and the rotor warning system has electrical power applied. A microswitch (SW18), located on the collective torque tube behind the pilot's seat, deactivates the audio horn (AH1) when the collective controls are on the down stop. The caution panel test/dim switch (SW14) will illuminate the warning light (LA3) for test purposes when the switch (SW14) is placed in the TEST position.

6.2 DESCRIPTION – HI/LO ROTOR RPM SWITCH

The Hi/Lo Rotor RPM Switch, located on the keel below the pilot's seat, interrogates the signal from the magnetic pickup and activates the ROTOR RPM warning light (LA3) and audio horn (AH1). The wiring schematic diagram of the Hi/Lo Rotor RPM Warning System is detailed in Figure 1.

6.3 REMOVAL – HI/LO ROTOR RPM SWITCH

- A. Ensure all electrical power is off.
- B. Remove the lower (keel) access panels IAW paragraph 8-14 of the Enstrom TH-28/480 Series Maintenance Manual to gain access to the keel structure below the pilot's seat.
- C. Unplug the electrical connector from the P/N ECD4079 Hi/Lo Rotor RPM Switch.
- D. Remove the four screws mounting the Hi/Lo Rotor RPM Switch to the keel.
- E. Remove the Hi/Lo Rotor RPM Switch.

6.4 INSPECTION – HI/LO ROTOR RPM SWITCH

- A. Inspect the Hi/Lo Rotor RPM Switch for damage, security of installation, and proper operation.

6.5 REPAIR – HI/LO ROTOR RPM SWITCH

- A. Replace the Hi/Lo Rotor RPM Switch if damaged or the unit fails to activate the light and horn or the unit cannot be set to activate at rotor speeds below 332 RPM and above 385 RPM.
- B. The Hi/Lo Rotor RPM Switch has been adjusted at the factory to activate at rotor speeds below 332 RPM or above 385 RPM. The unit should not need readjustment, but if it does, the operator may adjust the LO or HI potentiometers located on the top of the unit. Turn the LO adjustment counter clockwise to reduce the low-end (i.e. 332 RPM) activating rpm and clockwise to increase the low-end (i.e. 332 RPM) activating rpm.

Turn the HI adjustment counter clockwise to reduce the high-end (i.e. 385 RPM) activating rpm and clockwise to increase the high-end (i.e. 385 RPM) activating rpm.

6.6 INSTALLATION – HI/LO ROTOR RPM SWITCH

- A. Install the Hi/Lo Rotor RPM Switch onto the keel structure by securing the unit to the keel with four screws.
- B. Plug the electrical connector into the P/N ECD4079 Hi/Lo Rotor RPM Switch.
- C. Replace the lower (keel) access panels IAW paragraph 8-17 of the Enstrom TH-28/480 Series Maintenance Manual.

6.7. PARTS:

Part Number	Description	Quantity
ECD4079	Hi-Lo Rotor Switch	1
4199071	Hi-Lo Rotor RPM Switch Installation	1
MS3126F12-10S	Screw	4

7. SPECIAL TOOLS: None

8. MAN-HOURS: Removal/Reinstallation - 10 minutes

9. WARRANTY: Per Enstrom policy.

10. WEIGHT CHANGE: N/A

11. LOG BOOK ENTRY: As required for maintenance actions.

12. REPETITIVE INSPECTIONS: None

Previous Wire Diagram in Maintenance Manual:

(See Diagram 6-15, Sheet 2 of 5 of the Enstrom TH-28/480 Series Maintenance Manual)

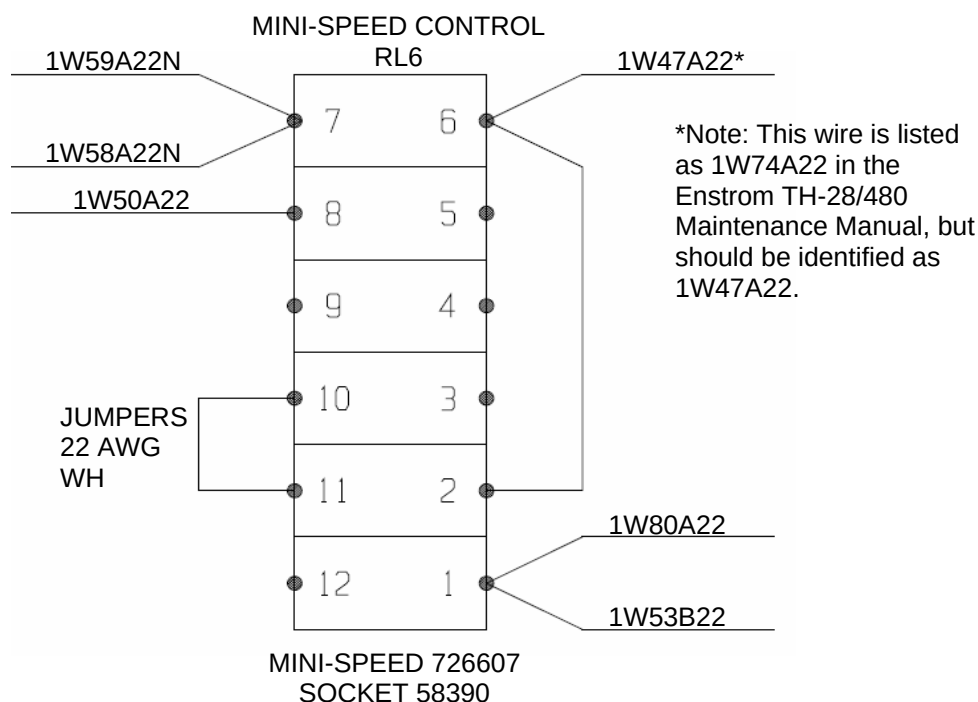
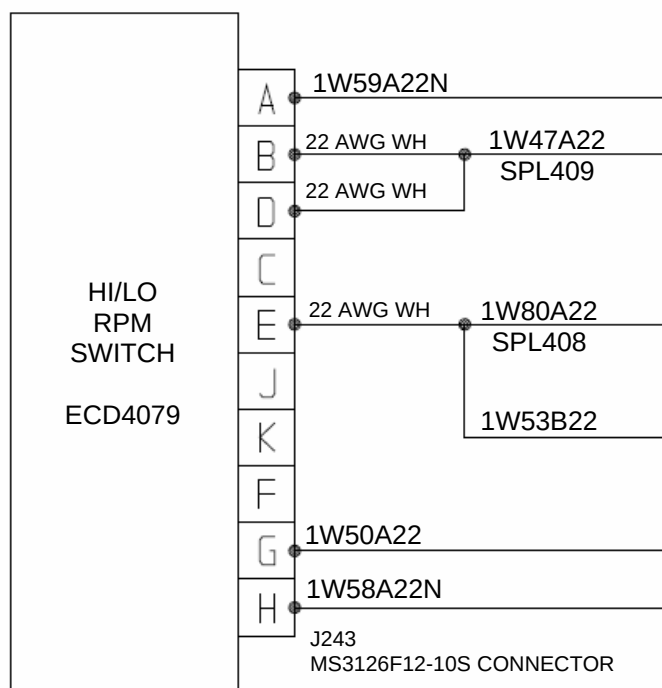
New Wire Diagram for Hi/Lo Rotor RPM Switch:

Figure 1. Caution/Warning System Interconnect